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Docket No. NEC00P344-si

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REMARKS

Attached hereto is a Petition and fee for a one-month time extension.

Applicant submits that entry of this Amendment is proper under 37 CFR §1.116, since no new claims or issues are raised and Applicant merely responds on the record to the Examiner's new interpretation of previously-cited Bender. More specifically, Applicant submits that the revised rejection is deficient even if everything alleged by the Examiner were to be considered as being true, since it fails to address the plain meaning of the claim language. The Examiner continues to miss the point that the present invention addresses the problem of a hand-off between two different mobile communications systems.

Claims 2, 3, 5, 6, and 8-12 are all the claims presently pending in the application. Claims 1, 4, 7, and 13-17 are canceled above, in an attempt to focus the Examiner's attention on a key feature of the present invention that two different systems are being described in the claims.

It is noted that the claim amendments are made only for more particularly pointing out the invention, and not for distinguishing the invention over the prior art, narrowing the claims or for any statutory requirements of patentability. Further, Applicant specifically states that no amendment to any claim herein should be construed as a disclaimer of any interest in or right to an equivalent of any element or feature of the amended claim.

Claims 1-17 stand as rejected under 35 U.S.C § 102(b) as being anticipated by Bender, et al (U.S. Patent No. 6,002,933).

This rejection is respectfully traversed in the following discussion.

I. THE CLAIMED INVENTION

As described and defined, for example, by claim 2, the claimed invention is directed to a mobile communication system including one or more base stations disposed in each of service areas for performing radio communication with a mobile station positioned in any of the service areas.

One or more base station controllers serves as a master station of the one or more base stations and has channel station data indicative of whether there is a channel between a mobile switching center as a master station thereof and another system mobile switching center in another system of different specifications.

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The one or more base station controllers has means for, when a mobile station enters the service area of the other system and then an inter-system hand-off control process is to be performed via the mobile switching center as the master station while communicating with the mobile station through the base station, determining whether or not, based on the channel station data, the mobile switching center as the master station has a channel connected to the other system mobile switching center, and, if so, requesting an inter-system hand-off control process as a process for switching communication channels between the mobile station and the other system mobile switching center to the mobile switching center as the master station. If the mobile switching center as the master station does not have a channel connected to the other system mobile switching center, an intra-system hand-off control process between the mobile station and the mobile switching center in a home system is requested.

One or more interconnected mobile switching centers serves as a master station of at least one of the one or more base station controllers, for performing the hand-off control process in a home system when the intra-system hand-off control process is requested. At least one of the one or more interconnected mobile switching centers has a communication channel connected to the other system mobile switching center, for performing a predetermined hand-off control process between itself and the other system mobile switching center when the inter-system hand-off control process is requested.

Each of the one or more mobile switching centers includes means for, when the intra-system hand-off control process is requested, selecting a mobile switching center in the home system which has a communication channel connected to said other system mobile switching center, and performing a hand-off control process between itself and the selected mobile switching center.

As explained at lines 12-21 of page 21 of the specification, the present invention addresses the problem of hand-offs between two different cellular systems, different because they have a different specification. That is, the two systems might be operated by different system providers, use different communication principles, or use different channel protocols. For example, as mentioned at lines 19-21 of page 21, one system might be a digital CDMA and the other might be an analog system.

Conventional systems, such as described in Bender, provide assured hand-offs between base stations within a mobile communications system but not between two different systems.

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The present invention achieves this benefit by having at least one mobile switching center (MSC) in the first system that is connected to at least one MSC in the second system and providing a feature that the base station controllers check data stored in memory to determine whether such an MSC interconnection exists. If no connection exists with the current MSC and the MSC of the different system, the present invention provides that an intra-system hand-off occurs to the MSC of the first system that does connect to the MSC of the different system. If a connection does exist, an inter-system hand-off is executed to the different system.

Moreover, the present invention provides such a method without expensive changes to the existing architecture of conventional mobile communications systems. Therefore, the present invention provides a cost-effective method to increase quality in such mobile communications systems.

II. THE PRIOR ART REJECTION

The Examiner continues to fail to understand that the present invention addresses a problem completely foreign to the prior art of record. That is, the present invention addresses the problem of interfacing between the service areas of two differentiated cellular systems. As described at lines 14-21 of page 21 of the specification, the two cellular systems may be differentiated because, for example, they have two different service providers, two different communication principles (e.g., CDMA vs analog), two different channel protocols, or two other types of specification.

In this regard and for this type of interface problem, the present invention has at least the two following distinguishing characteristics.

First, when a base station controller performs a hand-off control process via the mobile switching center (MSC), if the mobile switching center, as the master station, has a channel connected to the other system mobile switching center, the base station controller will request an inter-system hand-off control process to the mobile switching center as the master station.

Second, if the mobile switching center as the master station does not have a channel connected to the other system mobile switching center, the base station controller will request an intra-system hand-off control process to the mobile switching center as the master station. Furthermore, the mobile switching center that requested the intra-system hand-off control

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process, will select a mobile switching center in the home system which does have a communication channel connected to the other system mobile switching center and will perform a hand-off control process between itself and the selected mobile switching center.

The Examiner alleges that Bender teaches the claimed invention as defined by original claims 1-17. Applicant submits, however, that there are elements of the claimed invention which are neither taught nor suggested by Bender.

Indeed, it is clear that the Examiner continues to fail to recognize that the present invention is not addressing the problem of hand-offs between base stations within a system. Rather, the present invention addresses hand-offs to a base station in a system that is not related to the system currently serving the mobile station (e.g., two systems that may even be incompatible).

The Examiner has reworded the rejection based on Bender to refer to the simple hand-off process in Bender. On page 3 of the Office Action, the Examiner relies on the description at lines 42-63 of column 4 and lines and lines 8-50 of column 5. However, this simple hand-off process is not what is being described in the plain meaning of the language of the independent claims.

In the upper portion of page 4, the Examiner then proceeds to argue that this description "inherently" includes a process involving coordination between MSCs. Applicant respectfully submits that this "inherent" process described by the Examiner is not at all described in Bender and actually contradicts what is clearly described in Bender.

However, perhaps the most important point that Applicant can make at this point in this response is that, even if everything that the Examiner describes on page 4 were "inherent" in Bender, the plain meaning of the language of claim would not be satisfied.

The claim language requires that the base station controller determine whether or not one mobile switching center "... has a channel connected to the other system mobile switching center". The claim language also requires that this determination be based on "... channel station data indicative of whether there is a channel between a mobile switching center as a master station thereof and another mobile switching center...."

In the present invention, this channel station data is stored in memory corresponding to the tables exemplarily shown in Figures 6-9 of the present Application.

There is no component in Bender that is described as making this determination, nor

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does Bender have any data stored in memory that correspond to "channel station data".

Indeed, under the Examiner's "inherent" description on page 4, no such determination is required because, according to the Examiner's interpretation, the MSCs are constantly interconnected by a channel. Moreover, such a "determination" is not even possible in the system described by the Examiner, since the MSC interconnection channel is always present. Therefore, even under the Examiner's "inherent" analysis, the plain meaning of the language of the independent claims would not be satisfied by Bender, since there is neither "channel station data" nor a "determination process".

At most, the simple hand-off process described at lines 8-50 of column 5 of Bender can be reasonably described as only determining that mobile station is in a position to be handed-off. However, this simple determination of a readiness for a hand-off is not the "determination" that is described in the plain meaning of the claim language.

Hence, turning to the clear language of the claims, in Bender there is no teaching or suggestion of: "... having channel station data indicative of whether there is a channel between a mobile switching center as a master station thereof and another system mobile switching center in another system of different specifications, said one or more base station controllers having means for, when a hand-off control process is to be performed via said mobile switching center as the master station while communicating with said mobile station through said base station during an inter-base-station-controller soft hand-off control process, determining whether or not, based on said channel station data, said mobile switching center as the master station has a channel connected to the other system mobile switching center, and, if said mobile switching center as the master station has a channel connected to the other system mobile switching center, requesting an inter-system hand-off control process ... and, if said mobile switching center as the master station does not have a channel connected to the other system mobile switching center, requesting an intra-system hand-off control process ... when said intra-system hand-off control process is requested, selecting a mobile switching center in the home system which has a communication channel connected to said other system mobile switching center, and performing a hand-off control process between itself and the selected mobile switching center", as required by claim 2. The remaining independent claims have similar language.

Therefore, Applicant submits that there clearly are elements of the claimed invention

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that are not taught or suggest by Bender, and the Examiner is respectfully requested to withdraw this rejection.

For the reasons stated above, the claimed invention is fully patentable over the cited reference.

Further, the other prior art of record has been reviewed, but it too, even in combination with Bender, fails to teach or suggest the claimed invention.

III. FORMAL MATTERS AND CONCLUSION

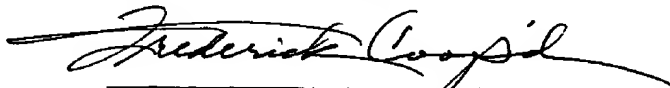
In view of the foregoing, Applicant submits that claims 2, 3, 5, 6, and 8-12, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Respectfully Submitted,

Date:

8/23/04

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CERTIFICATION OF TRANSMISSION

I certify that I transmitted via facsimile to (703) 872-9306 this Amendment under 37 CFR §1.116 to Examiner J. Perez on August 23, 2004.



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